



Clover Leaf
Environmental Solutions

Creating Energy and Water Awareness Using Autopilot

John Killoran and Cynthia Brown





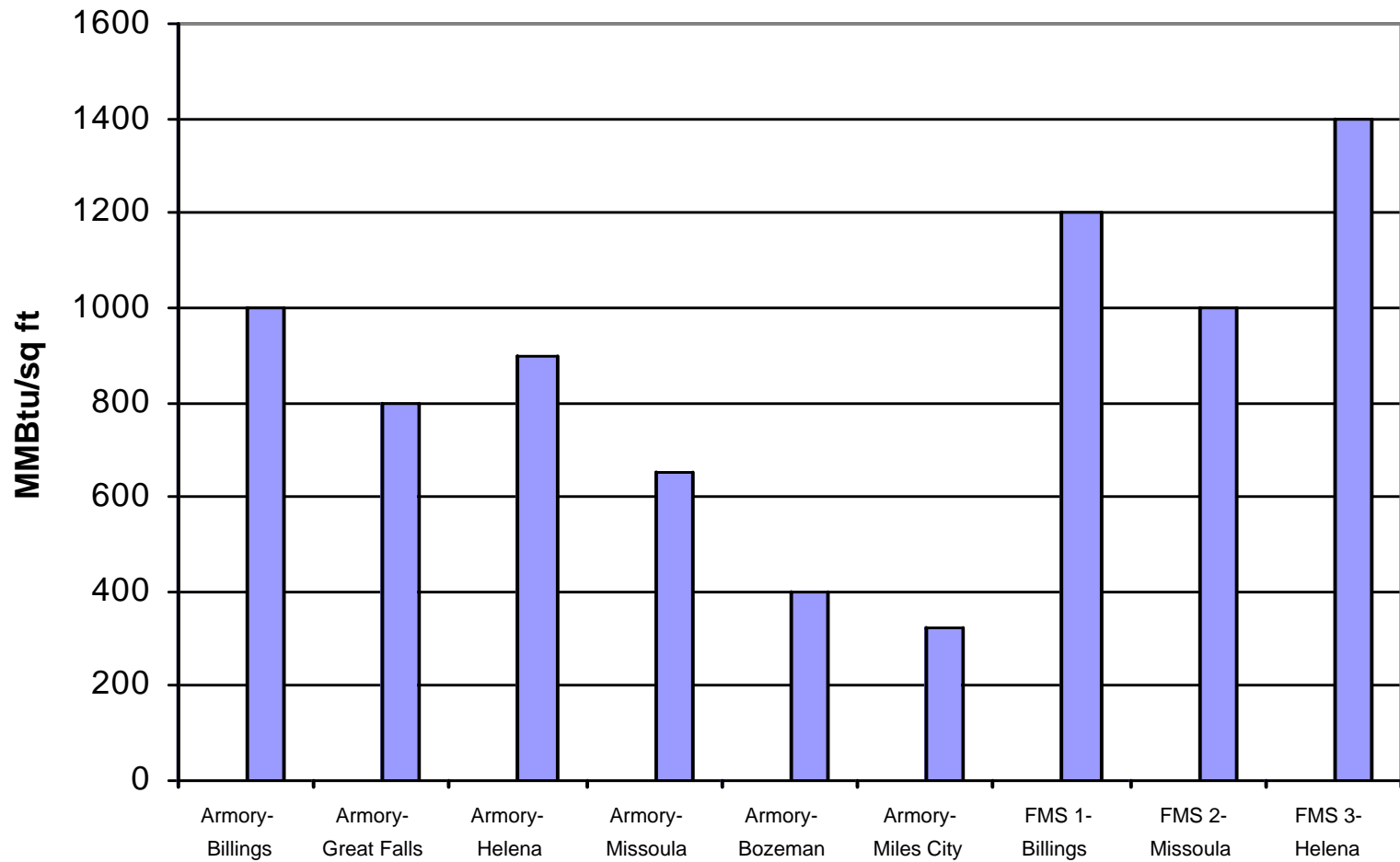
Energy Awareness Program

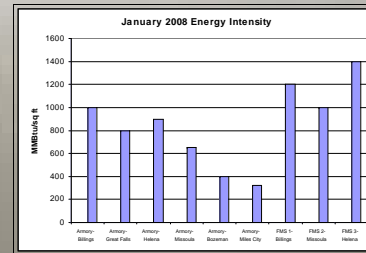
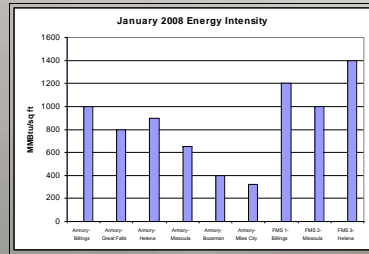
- Define It
- Communicate It
- Track It



\$156,000,000

January 2008 Energy Intensity



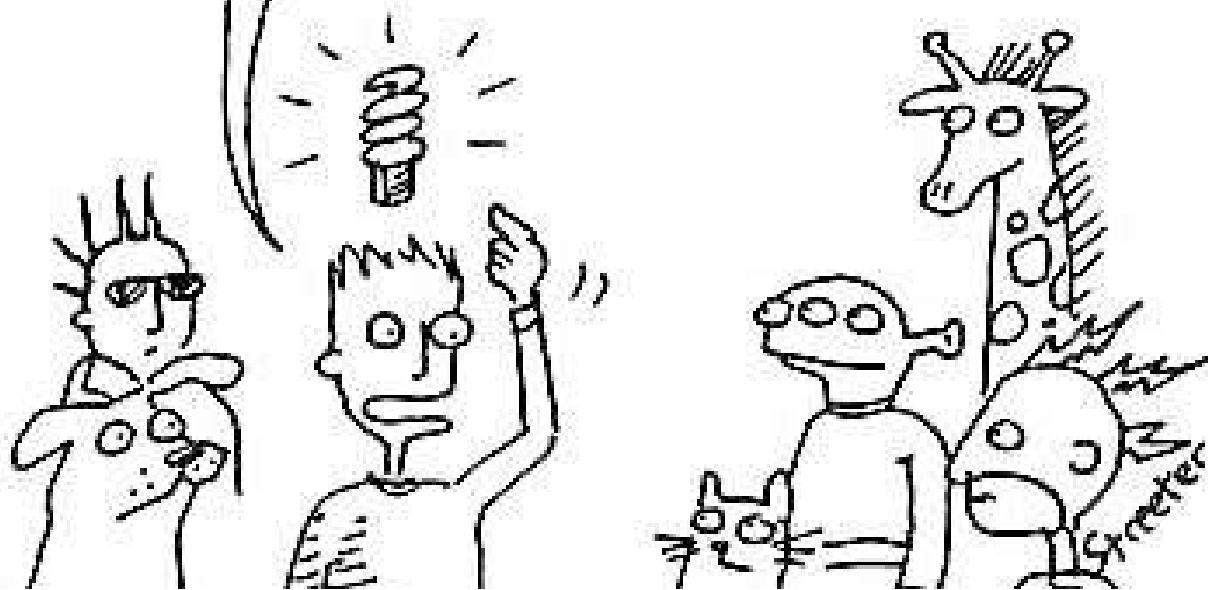








Okay - from now on,
when anybody gets an idea:
BZZT! Fluorescent bulb.
Got it?





Autopilot

- Web-based, off-the-shelf environmental management technology
- Powerful tasking and reporting capabilities
- Powered by Enviance
- **No programmers needed**





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Who Is Using Enviance?

Utilities/Energy



Pharmaceutical



ImClone Systems
Incorporated

Fed Government



Oil and Gas / Chemical

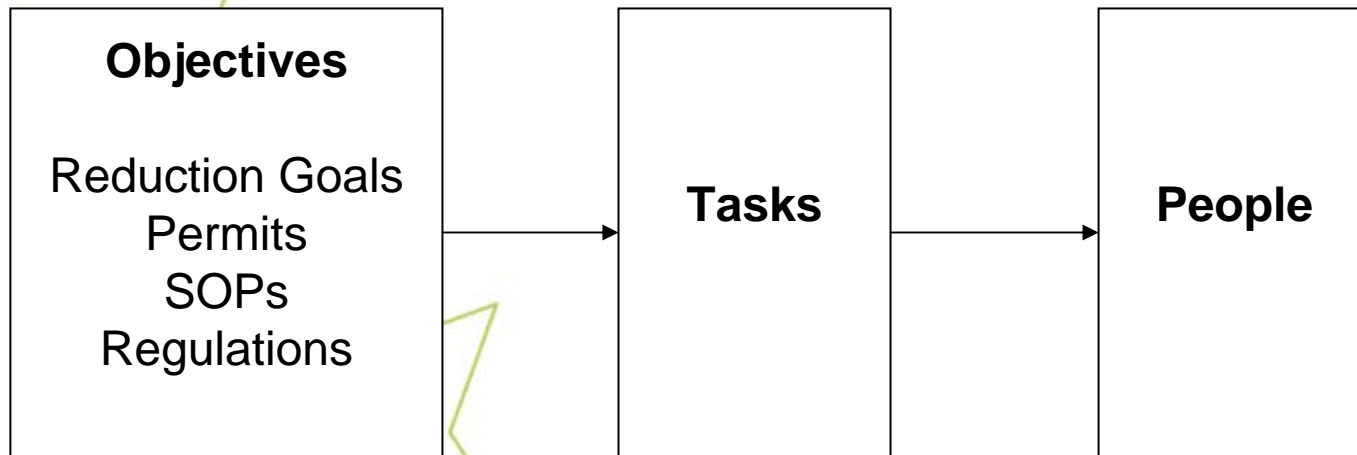


Manufacturing





Task Management





Army National Guard

- Simpler situation
- Don't have current data collection
- Need a means to get information out



Tasks ?

Task Completion or Dismissal

[Save](#) | [Cancel](#)

Task Name: **Provide Energy Efficiency & Water Use Feedback**
Created By: **Energy Manager**
Due Date: **10/15/2008 5:00 PM**

Description: **Monthly-Download the monthly Energy Management Report, new Energy Saving Tips, and the Water Management Report. Brief facility personnel and display the Reports and Energy Saving Tips. Post the Energy Saving Tips in the following locations: 1) bulletin boards; 2) break rooms and; 3) in restrooms above urinals and inside stall doors.**

Instructions on how to download documents are attached.

Documents:

[Open](#)


How to Download Documents.doc

Task's Objects

Object Name: **New Mexico Army NG\^NMARNG Facilities\AASF\Energy Management\Energy Consumption Data**

Dismissed: ☐

Completion Status: **0%** ▼

Completion Date: **9/22/2008**  **12:00 PM** ▼

Time To Complete: hrs.

Cost to Complete: \$

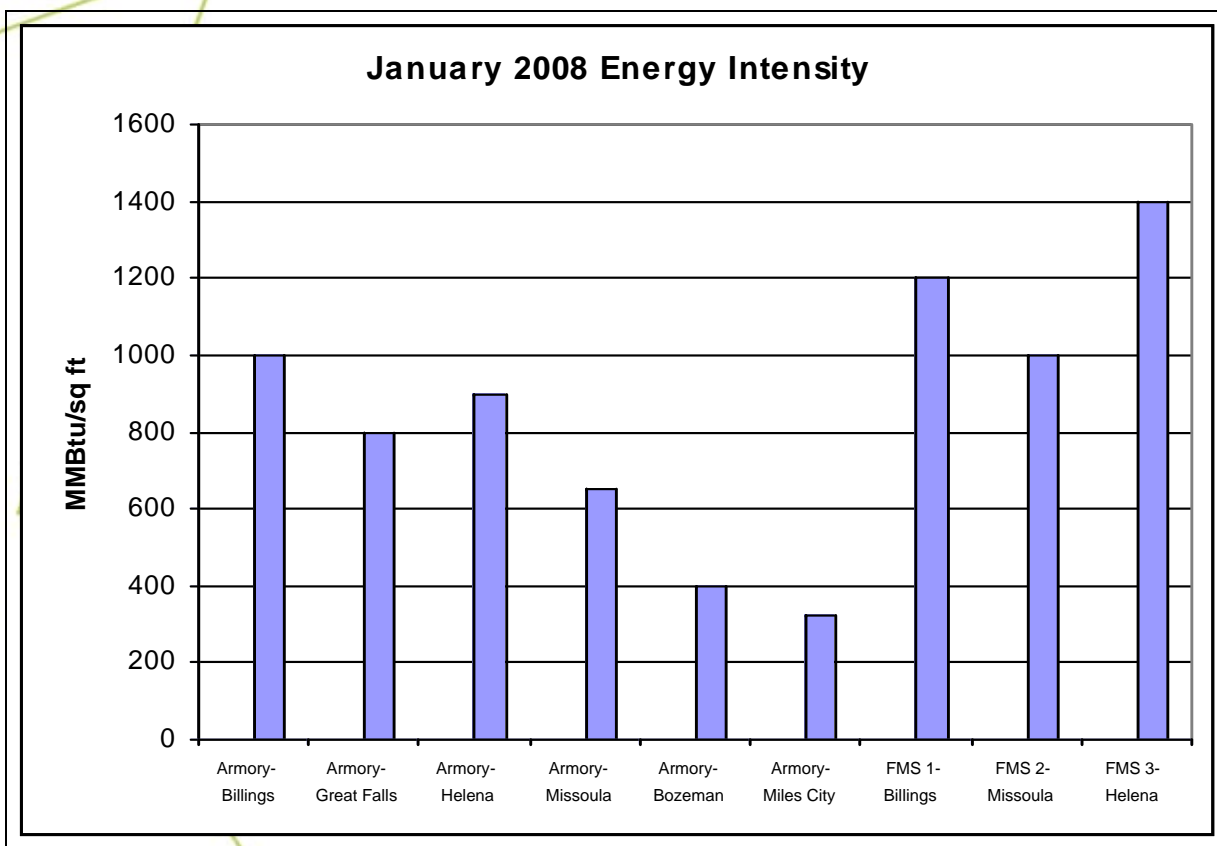
Comments:

[Save](#)

[Cancel](#)

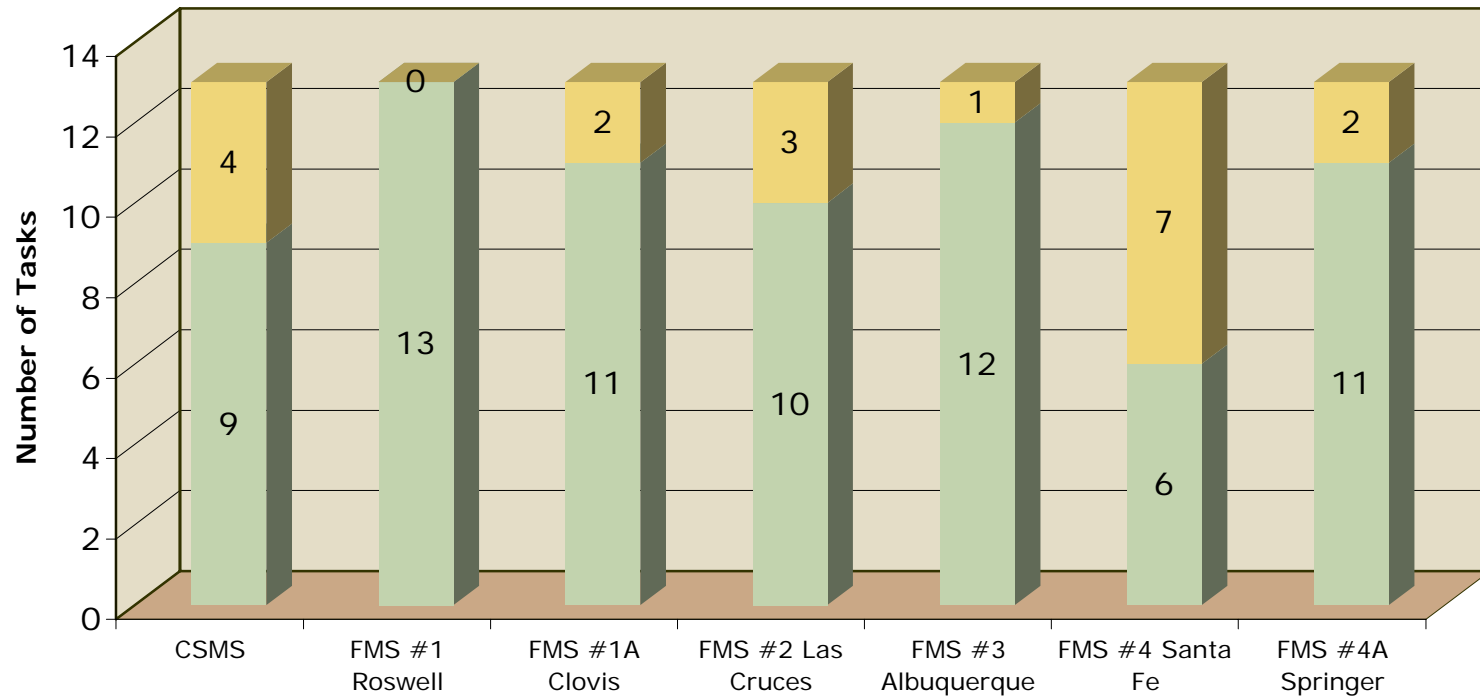


Example Report



All Maintenance Shops

Past Due Tasks
Completed Tasks





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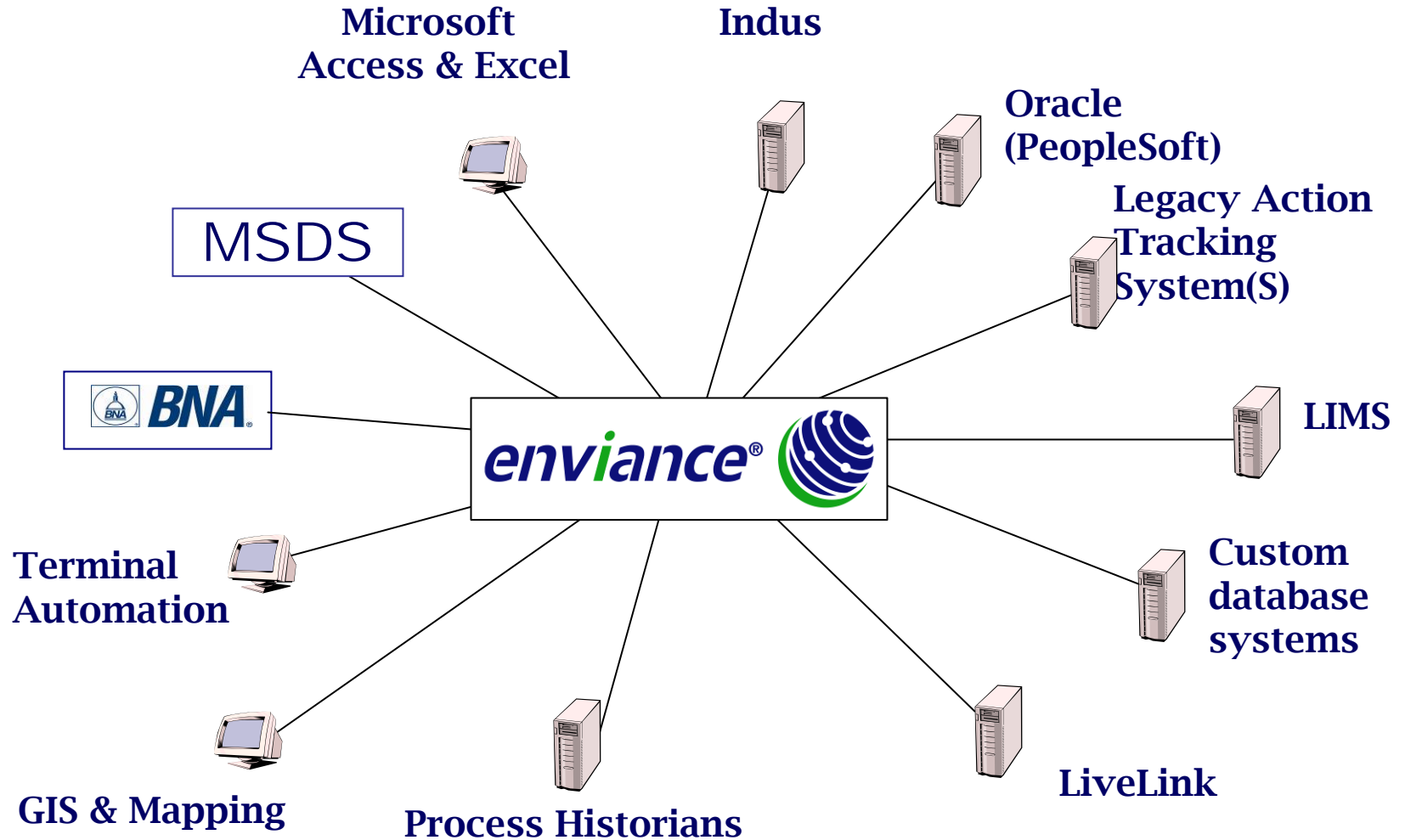


DuPont and AEP

- Title V and NPDES solutions
- Tasks to ensure compliance with permits: tasks have reminders and escalations
- System collects data and performs calculations
- Issues DMRs, Compliance Certifications



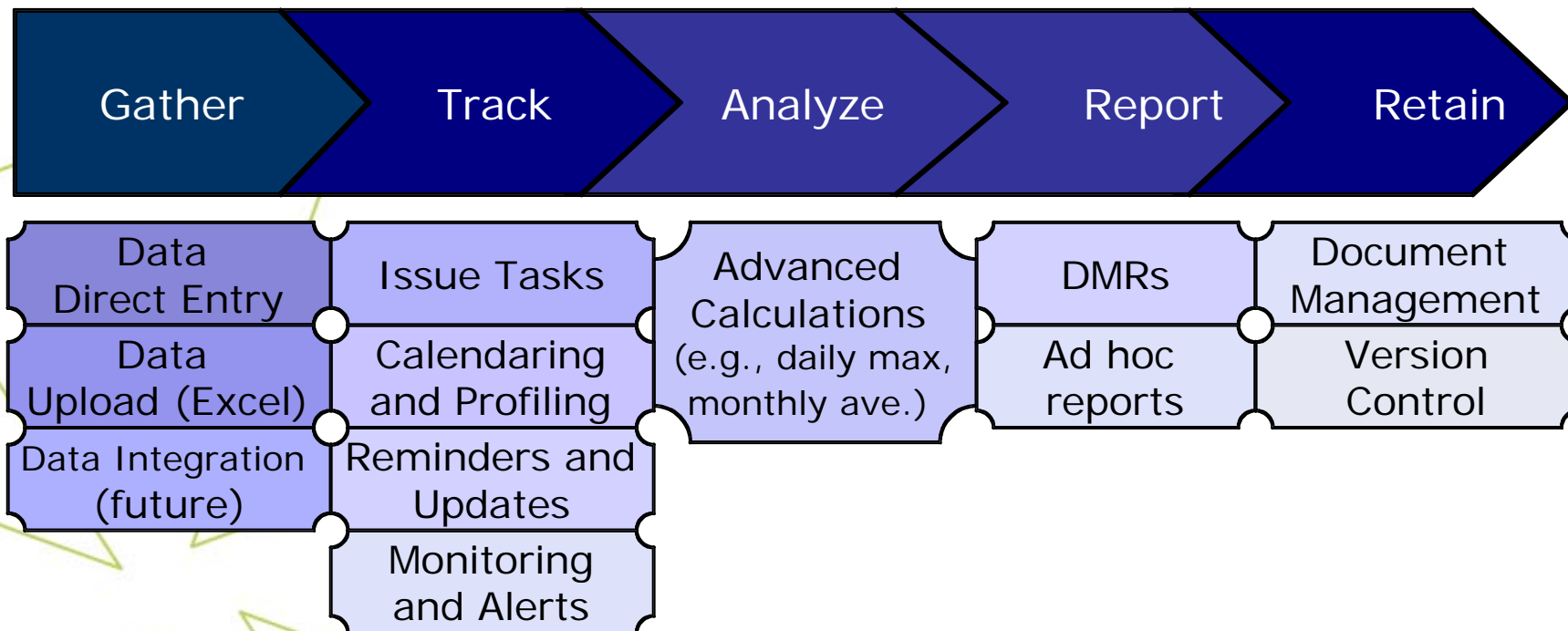
Integrates with Existing Databases



Copyright 2005 by Randy Glasbergen.
www.glasbergen.com



**“We back up our data on sticky notes because
sticky notes never crash.”**



Automatically Generates DMRs

PERMITTEE NAME/ADDRESS

NAME _____

ADDRESS: _____

FACILITY: _____

LOCATION: _____

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER _____


DISCHARGE NUMBER _____

MONITORING PERIOD

FROM _____

TO _____

NOTE: RISK 100%

PARAMETER		QUANTITY OR DURATION			QUALITY OR CONCENTRATION				NO OK
		AVERAGE	MAXIMUM	UNIT	MINIMUM	AVERAGE	MAXIMUM	UNIT	
	SAMPLE MEASUREMENT								
	PERMIT REQUIREMENT								
	SAMPLE MEASUREMENT								
	PERMIT REQUIREMENT								
	SAMPLE MEASUREMENT								
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NAMES/TITLE PRINCIPAL EXECUTIVE OFFICER

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing

SIGNATURE OF PRINCIPAL EXECUTIVE
OFFICER OR AUTHORIZED AGENT

DATE OF DISCHARGE

COMMITTEE AND EXPLANATION OF ANY VIOLATIONS

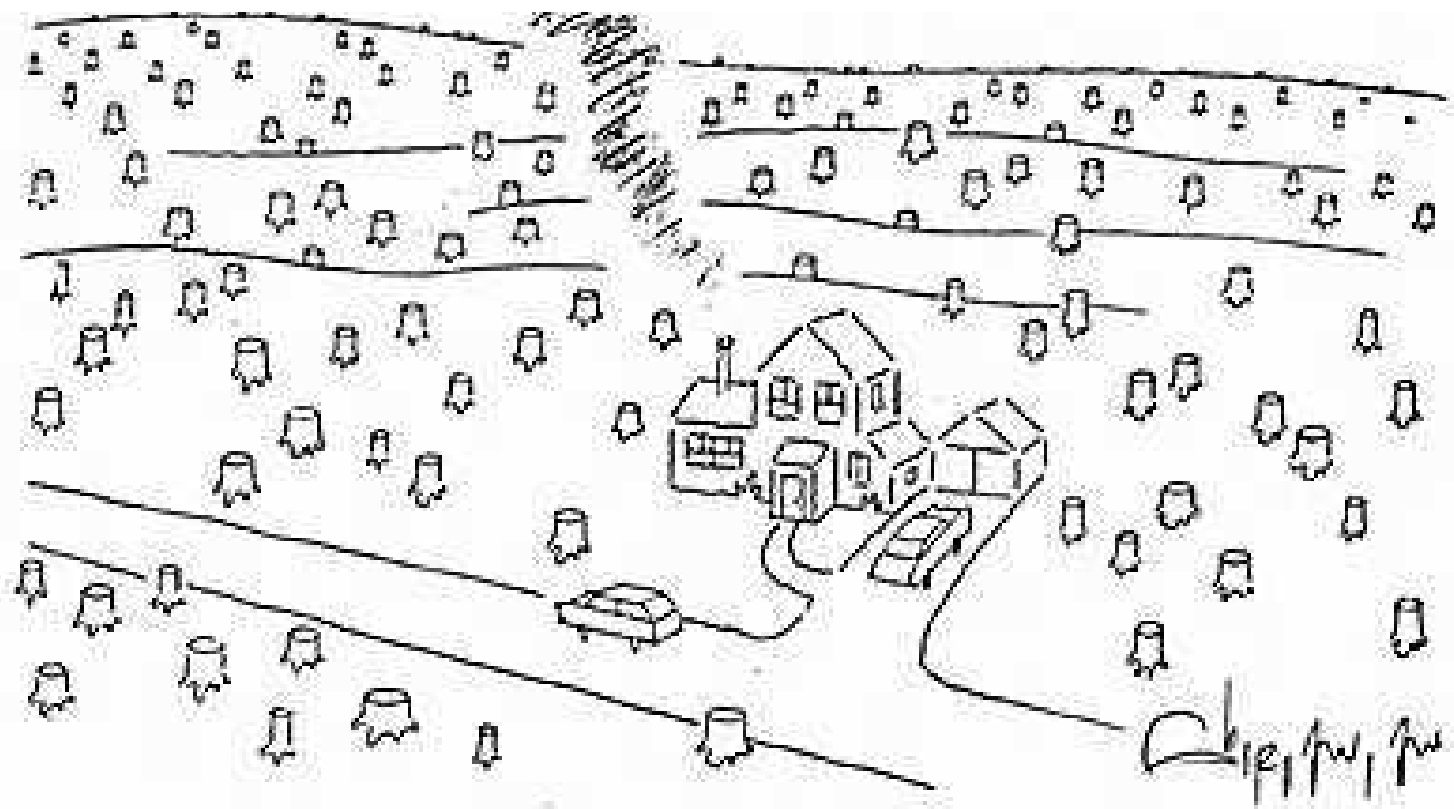
Signature of authorized agent



Summary

- Energy Awareness requires having good data, and good communication
- Energy Awareness can save 10-20% on your energy costs
- Autopilot completes the circuit between energy managers and the whole organization





"Can you believe it? Since we installed our wood-burning stove,
we've spent next to nothing on heating oil."